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Bio-Bites!

Open access Genome Project in UK

Britain is the fourth country to join the International Personal Genome Project, which was launched in the US in 2005 and has since been introduced in Canada and South Korea.[1]

The first Personal Genome Project initiated in the US has already had several hundred genomes sequenced.

The Personal Genome Project UK's ultimate goal is to sequence 100 000 genomes and make the data publicly available to enable researchers to learn more about the genetic basis of disease.

The organization plans to sequence 50 volunteers in the first year.

The Personal Genome Project UK is the first in the country to work on the basis of "open consent," which means that all medical information attached to a person's record will be made available for anyone to see online.[2]

A controversial aspect of the project is that while people's names and addresses will not appear on their records, potential participants are warned explicitly that they could easily be identified and that their privacy cannot be guaranteed.[3]

References

1. Personal Genome Project UK [Internet]. London (UK): Personal Genome Project UK: c2013 [cited 2014 Jan 31]. Available from: http://www.personalgenomes.org.uk/
2. Grens K. The U.K.'s newly launched Personal Genome Project seeks volunteers [Internet]. London (UK): The Scientist: c2013 Nov 8 [cited 2013 Jan 31]. Available from: http://www.the-scientist.com//?articles.view/articleNo/38223/title/Open-Access-Genomes/
3. Sample I. Critics urge caution as UK genome project hunts for volunteers [Internet]. London (UK): The Guardian: c2013 Nov 7 [cited 2014 Jan 31]. Available from: http://www.theguardian.com/science/2013/nov/07/personal-genome-project-uk-launch

First vaccination against malaria

Every year, around 660 000 people die from malaria, most of them small children under the age of five. There are over 200 million cases of the disease per annum worldwide, and children who survive the serious illness often suffer damage to their health and development in later life.

Developing a vaccine for malaria is notoriously difficult since the disease is caused by a complex parasite. Scientists have been searching for a way of immunizing against the disease for more than 60 years.[4]

The results of trials published in October 2013 in Durban, South Africa, showed that the RTS,S vaccine developed by GlaxoSmithKline (GSK) nearly halved the cases of malaria experienced by children aged between five and seven months and cut the number of cases in babies aged 6 to 12 weeks by a quarter.

GSK says the vaccine will be not-for-profit, but it will add 5% to the cost price, which will go toward further research and development work on tropical diseases.[5]

References

4. Roland D. Malaria vaccine: GSK's thirty-year quest to eradicate a global killer [Internet]. London (UK): The Telegraph: c2013 Oct 8 [cited 2014 Jan 31]. Available from:http://www.telegraph.co.uk/finance/newsbysector/pharmaceuticalsandchemicals/10362320/Malaria-vaccine-GSKs-thirty-year-quest-to-eradicate-a-global-killer.html
5. Boseley S. Malaria vaccine: Hopes rise for 2015 target after successful trials [Internet]. London (UK): The Guardian: c2013 Oct 8 [cited 2014 Jan 31]. Available from: http://www.theguardian.com/society/2013/oct/08/malaria-vaccine-trial-children-babies

2013 Nobel Prizes awarded

This year's Nobel Prizes have been awarded by the Royal Swedish Academy of Sciences. In Chemistry, the prize was shared by Martin Karplus, Michael Levitt, and Arieh Warshel for the development of multiscale models for complex chemical systems. The Nobel laureates devised methods that use both classical and quantum physics for simulation of how a drug couples to its target protein in the body.

The 2013 Nobel Prize in Physiology or Medicine was awarded jointly to James E Rothman, Randy W Schekman, and Thomas C Südhof for their discoveries of the machinery involved in regulating vesicle traffic.[6]

References

6. The Official Website of the Nobel Prize [Internet]. Stockholm (Sweden): The Nobel Foundation: c2014 [cited 2014 Jan 31]. Available from: http://www.nobelprize.org/

GM-maize paper by Séralini et al. (2012) retracted

In 2012, Gilles-Eric Séralini of the University of Caen, France, and his colleagues published results that suggested that genetically modified (GM) maize causes tumors in rodents.

The study has received considerable attention, and has been critically reviewed by numerous scientists and regulatory bodies, including the European Food Safety Agency (EFSA). In a press release issued in November 2012, EFSA affirmed its initial assessment that the authors' conclusions cannot be regarded as scientifically sound because of inadequacies in the design, reporting and analysis of the study as outlined in the paper. Consequently, it is not possible to draw valid conclusions about the occurrence of tumors in the rats tested."

In November 2013, the editors of the journal decided to retract the article after having reviewed the raw data and determined likewise that the results were inconclusive.[7]

Séralini is threatening to sue the journal, and at least 100 scientists have signed a petition to boycott its publisher, Elsevier.[8]

References

7. Elsevier Announces Article Retraction from Journal Food and Chemical Toxicology [Internet]. Cambridge (MA): Food and Chemical Toxicology: c2013 Nov 28 [cited 2014 Jan 31]. Available from: http://www.elsevier.com/about/press-releases/research-and-journals/elsevier-announces-article-retraction-from-journal-food-and-chemical-toxicology
8. Grens K. GMO Retraction Sparks Retribution [Internet]. London (UK): The Scientist: c2013 Dec 5 [cited 2014 Jan 31]. Available from: http://www.the-scientist.com//?articles.view/articleNo/38566/title/GMO-Retraction-Sparks-Retribution/